UNITED NATIONS
ECONOMIC AND SOCIAL COUNCIL

Distr.: GENERAL
E/ECA/CM.13/19/Summary
6 February 1987
Original: ENGLISH

ECONOMIC COMMISSION FOR AFRICA

Eighth meeting of the Technical Preparatory Committee of the Whole

Addis Ababa, Ethiopia
13 - 20 April 1987

Item 7 of the provisional agenda*

ECONOMIC COMMISSION FOR AFRICA

Twenty-second session of the Commission/ thirteenth meeting of the Conference of Ministers

Addis Ababa, Ethiopia
23 - 27 April 1987

Item 6 of the provisional agenda**

REPORT OF THE REGIONAL CONSULTATIVE MEETING ON THE MOBILIZATION OF FINANCIAL RESOURCES FOR THE DEVELOPMENT OF NEW AND RENEWABLE SOURCES OF ENERGY IN AFRICA

Executive Summary

* E/ECA/TPCW.8/1.
** E/ECA/CM.13/1.

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1. The Regional Consultative Meeting for the Mobilization of Financial Resources for the Development of New and Renewable Sources of Energy in Africa was convened in Addis Ababa, Ethiopia, from 25 to 27 November 1986, for the purpose of providing a forum for the potential donors, African recipient countries and international organizations to consider the promotion of projects in the area of new and renewable sources of energy and to address the question of mobilization of financial resources for the implementation of these projects. It was organized on a new formula which substituted the single event consultative meeting by the concept of "consultative process" by which consultations are made on continuing basis between member States, economic development organizations and potential donors.

2. The meeting was attended by the representatives of the following African member States: Angola, Burundi, Egypt, Ethiopia, Ghana, Kenya, Nigeria, Mozambique, Rwanda, Senegal, the Sudan and Zimbabwe.

3. The representatives of Austria, Belgium, Brazil, Canada, China (Peoples Republic of), Germany (Federal Republic of), Finland, France, Italy, Norway, Sweden, United Kingdom, United States of America and the Union of Soviet Socialist Republics also attend the meeting.

4. The representatives of the following African regional and subregional organizations were also in attendance: African Development Bank (ADB), Communaute Economique de l'Afrique de l'Ouest (CEAO), Economic Community of West African States (ECOWAS), Preferential Trade Area (PTA), South Africa Development Co-ordination Conference (SADCC), and Economic Community of Central African States (ECCAS).

5. The meeting was also attended by the representatives of the following international organizations and others within the United Nations system: Office of the Director-General for Development and International Economic Co-operation (DIEC), Department of International Economic and Social Affairs (DIESA), Department of Technical Co-operation for Development (DTCD), Food and Agriculture Organization of the United Nations (FAO), International Labour Organisation (ILO), International Telecommunication Union (ITU), United Nations Development Programme (UNDP), United Nations Environment Programme (UNEP), United Nations Educational, Scientific and Cultural Organization (UNESCO), World Meteorological Organization (WMO), and European Economic Community (EEC).

6. In the discussion that followed, the African member States, developed and developing countries, intergovernmental organizations and United Nations agencies presented their statements on the development of new and renewable sources of energy for their respective countries and organizations. Authentic project proposals which have been designated by African countries as priority projects in the field of development of new and renewable sources of energy were presented. Synoptic overview of these statements is presented in the following paragraphs.

7. The consumption of fuelwood in Africa has increased in rural as well as urban areas and the consumption of charcoal was increasing even faster. This has an implication on the fuelwood supply and attendant environmental consequences. There is need for more detailed information on the level and extent of fuelwood and charcoal consumption in order to develop appropriate policy measures to respond to the problem. The fuelwood needs in Africa are quite high and generally are between 1.0 and 1.9 m3 per person per year. With this consumption level it is easy to forecast an acute scarcity of fuelwood in Africa in the future.

8. Development and utilization of new and renewable sources of energy in Africa may offer a partial solution to the energy problem in the majority of African countries. The African countries should therefore seek ways for the effective utilization of other alternative sources of energy such as solar energy and biogas or make use of the economically improved stoves.

9. It is very difficult to estimate present and future supply contribution of renewable sources of energy, though some African countries project substantial production. It should be noted that for more than five years since the Nairobi Conference, renewable sources of energy has been advocated as a widespread solution to the energy problems of Africa. Unfortunately, in some cases, the credibility of renewable energy technologies has suffered from premature and excessive promotion of these technologies in Africa.

10. Small power system using photovoltaic panels have reached the stage where wider application and use should be promoted in Africa for pumping water, providing power for essential services such as medical dispensaries and telecommunications and preserving vaccines through refrigeration in remote rural areas located far from large-scale power systems.

11. Power alcohol production in some African countries holds the promise of freeing many non-oil producing countries from high energy bills. However, falling prices of petroleum have eroded the interest in some African countries that opted to forge ahead in power alcohol production using cane sugar.

12. Geothermal resources are widely distributed in Africa, especially in the eastern part and some of the countries in this subregion have already constructed geothermal power generation facilities. It should be noted that in the development of geothermal energy in Africa, the resources of the UNDP energy account have been used to provide a catalytic role in the utilization of additional resources.

13. Biogas installations in commercial livestock operations and biomass gasification for direct heat application became one of the most important technologies in rural areas of Africa. These technologies show considerable economic promise, but there are still technical constraints to be overcome and further cost reduction is necessary to stimulate widespread use of biogas digesters in African countries.

14. The mini-hydro electric power stations are very popular in Africa now in spite of the fact that their costs proved to be highly site-specific. Mini-hydro has traditionally been seen as appropriate in those rural areas to which it is impracticable to extend the national grid. The principal need in developing mini-hydro is for cost-effective national programmes that can deal with hundreds of small, widely dispersed projects in a field traditionally served by large centralized facilities.

15. The expectation raised by the Nairobi Conference that African countries would be able to develop the enormous potential of renewable sources of energy has not yet been fulfilled. There are two major reasons for this: first, the development and application of photovoltaics and biogas digestors has proved more difficult than it was expected for the institutions in African countries dealing with the development of renewable sources of energy.

16. Many mature technologies for the development of new and renewable sources of energy are already in existence. However, there is a problem of the diffusion of these technologies to the potential users. Associated with this is the problem and issue of acceptance by the potential users, especially in rural areas, of the existing technologies.

17. In practically all the African countries, the question of training and institution building has been identified as demanding particular priority and for those countries that have embarked on some programmes in the field of new and renewable sources of energy there is emphasis on the need to use, as much as possible, local materials in the manufacture of equipment and components.

18. The Regional Consultative Meeting for the Mobilization of Financial Resources for the Development of New and Renewable Sources of Energy in Africa made the following conclusions:

(a) This Consultative Meeting has resulted in a very useful exchange of information between the African countries, the donors, and the international institutions represented at the meeting. It can be ascertained that the meeting served the purpose of initiating a process of consultation which should lead to specific financial and technical assistance commitments;

(b) Participants of the Consultative Meeting agree that renewable sources of energy continue to play an important role in meeting the energy requirements of African countries;

(c) The surveys made indicated that there is a potential for solar energy for hydropower, for biomass utilization and wind energy;

(d) In the rural areas, energy consumption is characterized predominently by fuelwood and charcoal which is considered as the major sources of energy. Improved stoves for better fuelwood and charcoal utilization is of widespread interest;

(e) Biomass utilization from agricultural and industrial wastage to be used in different ways as direct combustion or gasification or pyrolysis, biogas or alcohol will contribute to the energy requirements;

(f) Photovoltaic panels in remote rural areas may be regarded as very useful for pumping water and providing power for essential services, such as lighting, preserving vaccines through refrigeration, and telecommunications;

(g) Geothermal resources are a valuable sources of energy in those areas of Africa (especially in the eastern part) to be exploited and utilized and technologies are available as a potential solution to the energy problems;

(h) Mini-hydropower could be regarded effective in remote areas to which it is impracticable to extend the national grid provided that the cost would be compatible with their uses;

(i) Wind energy for water pumping (wind mills) and for small electric power production would partially contribute to the energy requirements in favourable locations.

19. The Regional Consultative Meeting for the Mobilization of Financial Resources for the Development of New and Renewable Sources of Energy in Africa made the following recommendations:

General

(a) All NRSE projects should be geared towards rural development as far as possible and projects should be integrated into relevant ongoing governmental activities as much as possible;

(b) While bilateral co-operation should be continued, multilateral arrangement should be encouraged and strengthened as a means of strengthening intra-African co-operation at subregional and regional levels;

(c) It is recommended that the potential environmental impacts of all new and renewable sources of energy projects be assessed and evaluated, with the view to reducing these impacts to the practical minimum, in the most cost-effective ways. It is essential that the activities required for the assessment and management of these impacts be budgeted for in the project proposal itself.

Recommendations to African member States

(d) All the African Governments should consider the development of new and renewable sources of energy not in isolation but within the overall social and economic planning;

(e) The participation of the private sector in the financing of the new and renewable sources of energy projects is not adequate though this participation is necessary and desirable. A mechanism for this should be analysed and strengthened;

(f) Governments should lay emphasis on the assessment and development of manpower and skills required in the field of new and renewable sources of energy;

(g) Governments should stress the analysis of employment, work safety and health and other economic implications of their socio-economic new and renewable sources of energy projects and policies.

Recommendations to ECA and international organizations

(h) ECA is strongly urged to exert all its energies to help all African countries to secure funds for the development of new and renewable sources of energy, including training, research and development and demonstration programmes;

(i) ECA and United Nations institutions should assist in the review of project proposals when requested by African Governments and institutions within their technical and financial capabilities;

(j) ECA should collect information regarding particular bilateral or multilateral negotiations of the project proposals, and in a year's time prepare a brief report on the activities resulting from this consultative meeting and make it available to the meeting's participants and other interested institutions or governments;

(k) ECA should identify particular topics, issues or technological fields for which selective meetings could be convened to further advance the mobilization of financial and technical assistance;

(l) ECA should maintain close contact throughout the consultation process with other United Nations institutions in relation to the actual implementation of projects in order to effectively utilize their technical and executing potential. DIEC and DIESA are urged to assist ECA throughout the consultative process both in relation to co-ordination of United Nations institutions as in the contacts with donors;

(m) ECA is strongly urged to follow up and co-ordinate the implementation of the various recommendations regarding the development of new and renewable sources of energy in various United Nations, OAU and other meetings and to encourage the implementation of all regional and subregional projects in this field;

(n) ECA is strongly urged to ensure that maximum priority should be given to training and education programmes in the field of new and renewable sources of energy in Africa and that it should be in a position to organize workshops or meetings on specific topics such as biomass, during the plan of the project implementation and execution of national projects;

(o) It has been noticed with concern that North African countries are not sufficiently involved in the ECA activities and one of the reasons for this could be the lack of missions mounted by ECA to this subregion. It is strongly recommended that North African member States should be visited by ECA staff dealing with new and renewable sources of energy issues;

(p) ECA is strongly urged to approach some Arab and Islamic financial institutions as well as other institutions and seek their financial support for the implementation of the project proposals formulated by this meeting;

(q) New and renewable sources of energy development in Africa requires greater inter-action and co-ordination between national, subregional and regional institutions. The meeting strongly recommends that ECA should create some mechanism which would ensure better use of the expertise and experiences gained already in some African countries;

(r) The dissemination of information on new and renewable sources of energy technologies is crucial in the overall promotion of new and renewable sources of energy in African countries. The various organizations and agencies, particularly those within the United Nations system, are therefore urged to evolve a more effective system to enable better dissemination of information on new and renewable sources of energy technologies.

Recommendations to donor countries and organizations

(s) All the donor governments and agencies should be strongly urged to consider the financing of the development of new and renewable sources of energy within the energy development programmes of each country;

(t) Given the fact that the majority of the African population is confined in rural areas, the projects on new and renewable sources of energy should therefore be designed for the benefit of rural people. Donor countries are strongly urged to set aside the financial resources for the development of new and renewable sources of energy especially for the benefit of the rural African;

(u) Donor countries and agencies should more thoroughly review the project proposals submitted at the meeting and send their technical comments and their interest position to ECA and to African member States within the next three months;

(v) The proposals submitted to the Regional Consultative Meeting should be reviewed in the light of technical comments received at the meeting in order to standardize their presentation format.